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NEX-FS100EK

Super 35mm Exmor™ CMOS Sensor Camcorder with 11x Zoom E-Mount Lens

Affordable high quality motion picture production

The NXCAM NEX-FS100EK Super 35mm camcorder has been developed specifically for shooting truly stunning images at low cost. The high sensitivity, large format CMOS sensor is capable of producing full 1920 x 1080 progressive images with shallow depth of field similar to that of a film camera.

For even more creative flexibility, the NEX-FS100 also enables extended continuous recording and simultaneous recording of HD video footage for instant backup with an HXR-FMU128 Flash Memory Unit. These and other valuable features make this compact, high performance camera ideal for producing everything from low budget commercials, music videos and documentaries to wedding videos.

The NEX-FS100EK is supplied with the E 18–200mm F3.5–6.3 OSS) E-Mount lens, with 11x zoom power. An ultra-compact E-Mount wide-angle lens and 3x zoom lens are also available as options.

This product also comes with the full PrimeSupport package. That's fast, hassle-free repairs, a helpline offering expert technical advice, and a free loan unit while yours is repaired. Plus the peace of mind that Sony is looking after your equipment – and your business.

Features

Exmor™ Super35 CMOS Sensor for Shooting Motion Pictures

Equipped with a large CMOS sensor equivalent in size to Super 35mm film, the NEX-FS100EK enables shooting with the same creative depth of field as the PMW-F3.

The sensor also features the optimum number of effective pixels for shooting HD moving images. At a high 50fps in all-pixel scan mode, this allows images to be captured with less colour aliasing, jaggedness and rolling shutter than DSLR cameras, while providing the sensitivity to shoot at a minimum illumination of 0.28lux*. Another advantage of Exmor™ technology is minimal noise when shooting low-light scenes.

* When using a fixed shutter speed of 1/25, auto gain and an iris setting of F1.4 The SEL18200 lens supplied with the NEX-FS100EK enables shooting in illumination as low as 1.5lux when using a fixed shutter speed of 1/25, auto gain and auto iris

E-Mount Interchangeable Lens System

Sony's E-mount interchangeable lenses let you enjoy a level of creative freedom unimaginable with camcorders of the past. All feature precision-crafted optics with aspherical glass elements for compact high performance, and circular iris mechanisms for smooth background defocusing. The supplied SEL18200 (E 18–200mm F3.5–6.3 OSS) with the NEX-FS100K boasts 11x zoom power, a quiet AF motor for cleaner sound recording, and Optical SteadyShot™ image stabilisation with an advanced Active mode that lets you take steady handheld shots while walking around — even without a bulky stabilisation rig. An ultra-compact SEL16F28 wide-angle lens and SEL1855 3x zoom lens are also available.

Thanks to the E-mount's short 18mm flange-back distance, using a mount adaptor allows shooting with a wide range of existing lenses. For example, with the optional LA-EA1 mount adaptor, you can take advantage of the abundant lenses (A-mount lenses). Third-party adaptors enable use of an even wide variety of lenses.

Modular design for a variety of shooting styles

Featuring a compact, lightweight body with detachable grip, handle, and viewfinder, the NEX-FS100EK is ideal for a wide range of shooting situations.

During hand-held shooting, the angle of the grip can be changed as desired, and recording started and stopped with a button on the grip. Recording start/stop buttons are also provided on the top and lower

right of the camera.

There are also 1/4- and 3/8-inch screw holes on both the handle and the bottom of the camera body for mounting various peripheral devices. Plus a tape measure hook and an image sensor position index on the body.

XtraFine LCD panel

Located on the optical axis, the 3.5-inch-type XtraFine™ LCD panel enables easier, more intuitive framing, especially during hand-held shooting. And the LCD panel can be rotated for stress-free operation when shooting low-angle scenes and digital signage footage. For easier, more precise focusing in daylight, the viewfinder comes with a detachable 1.2x magnifier.

1920 x 1080P Slow and Quick Motion

Recording images at a different frame rate from that used for playback provides the extra versatility of slow and quick motion shooting. Furthermore, the NEX-FS100EK enables Full HD (1920 x 1080) progressive slow and quick motion. Frame rates are selectable from among 50fps, 25fps, 12fps, 6fps, 3fps, 2fps and 1fps. So, for example, when recording at 1080/25p, if the frame rate is set to 50fps, images are recorded in 2 times slow motion. This means you can create impressive slow motion scenes without the need for troublesome editing.

Note: Shooting in slow and quick motion is possible during HD recording and in the progressive mode. Simultaneous recording to a memory card and the flash memory unit is not possible.

Hybrid recording

Recording to the directly mountable HXR-FMU128 Flash Memory unit allows continuous recording for over 10 hours without changing the recording medium. Simultaneous recording using memory cards and other media is also possible for secure backup when shooting footage that can't be reshot.

Note: When recording on different media, the resolution must be HD or SD. HD and SD cannot be simultaneously on different media.

NXCAM Recording Format

Like other NXCAM series cameras, the NEX-FS100EK uses the well established AVCHD recording format supported by a wide range of nonlinear editing systems. Better still, it's ready to shoot with a maximum frame rate of 1920 x 1080/50p (28Mbps) for even higher quality recording. For more flexibility, it's also possible to record in Standard Definition MPEG-2 format.

Uncompressed 4:2:2 Output with Embedded Time code

When shooting, the NEX-FS100EK can output uncompressed 4:2:2 footage via HDMI (with an embedded SMPTE Time Code) which can be recorded onto external media, such as HDD.

Geotagging with built-in GPS receiver

A built-in GPS receiver makes the NEX-FS100EK an ideal choice for professional videographers. The receiver gives you the ability to "geo-tag" shooting locations - making it easy if you need to return to the same location or to create a log when surveying remote locations. Your locations can be tracked on Google Maps and all GPS data can be extracted with a PC.

Additionally, the receiver automatically adjusts your camcorder's clock to the proper time zone when international travel is part of your assignment.

Picture Profile™

Six picture profile settings for different shooting conditions are provided as default settings. Selecting a picture profile for a particular scene offers an easy way to creatively change your shoot.

Last Scene Review

Press a single button to immediately review the last recorded scene.

Expanded Focus

Press a button and this enlarges the centre of the displayed image by 2x, a particularly useful feature when making critical focusing adjustments.

Histogram

Onscreen display of a histogram enables easier exposure adjustment. The histogram also shows the point where the zebra pattern appears (the zebra point). This enables confirmation of overall brightness distribution and the brightness level set with the zebra function. As well as preventing overexposure, this is useful as a guide when aiming for optimum exposure of certain parts of an image, such as faces.

Peaking

A peaking function draws a defined line around the subject displayed in the LCD monitor and viewfinder. Peaking sensitivity and colour (red, white, yellow) can be selected to enable more precise focusing.

Markers

Centre, aspect, safety zone, guide frame and other markers can be displayed on the LCD.

Firmware Update

Sony has implemented a firmware update scheme for future functions.

Technical Specifications

General	
Mass	Approx. 1.04 kg (2 lb 4oz) (body only) Approx. 2.76 kg (6 lb 1oz) (w/optional lens w/VF, w/ Battery (NP-F970), w/large eyecup, w/handle, w/MIC (ECM-XM1), w/grip, w/o gripbelt)
Dimension (W x H x D)	Approx. 126.5 x 101.5 x 193.5 mm (5 x 4 x 7 5/8 inch) (body only) Approx. 178 x 192 x 519.5mm (7 1/8 x 7 5/8 x 20 1/2 inch) (w/optional lens, w/VF, w/large eyecup, w/handle, w/MIC (ECM-XM1), w/grip, w/o gripbelt)
Power requirements	8.4V / 7.2V (AC adaptor / Battery)
Power consumption	5.6W (w/ supplied lens, w/ ECM-XM1 and LCD with normal brightness) N.B. When Flash Memory Unit HXR-FMU128 is used, the average power consumption increases about 1.1W.
Operating temperature	0 to +40 deg C (+32 to +104 deg F)
Storage temperature	-20 to +60 deg C (-4 to +140 deg F)
Continuous Recording Time	Approx. 510 min (NP-F970:fully charged battery)

Recording Section	
Recording format	Video Format HD: MPEG-4 AVC/H.264 AVCHD format compatible (1080/50p original format). Video Format SD: MPEG-2 PS Audio Format HD: Linear PCM 2ch, 16bit, 48kHz / Dolby Digital 2ch, 16bit, 48kHz STD: Dolby Digital 2ch, 16bit, 48kHz
Recording frame rate	HD PS (28Mbps) 1920x1080/50p, HD FX (24Mbps) 1920x1080/50i, HD FH (17Mbps) 1920x1080/50i, HD HQ (9Mbps) 1440x1080/50i, HD LP (5Mbps) 1440x1080/50i, HD FX (24Mbps) 1920x1080/25p, HD FH (17Mbps) 1920x1080/25p, HD FX (24Mbps) 1280x720/50p, HD FH (17Mbps) 1280x720/50p, SD/STD HQ (9Mbps) 720x576/50i (Due to variable bitrate, 24Mbps is the maximum bitrate for AVCHD FX mode and the average bitrate is being stated for FH, HQ and LP modes.)
Recording/Playback time	170 min (2h 50m) with 32GB Memory Stick PRO-HG Duo HX at FX(24Mbps) Linear PCM 2ch recording

Lens (supplied with NEX-FS100EK)	
Lens mount	E-mount
Model Name	SEL18200
Product Name	E 18-200mm F3.5-6.3 OSS
Equivalent 35mm-format focal length	16:9 28.8 - 320mm 4:3 36- 400mm
Zoom ratio	11.1x
Filter Diameter	67mm

Camera Section	
Imaging device	"Exmor" Super35 CMOS Sensor
Gross Pixels	Approx. 3,530,000 pixels
Effective pixels of moving pictures in 16:9	Approx. 3,370,000 pixels
Effective pixels of moving pictures in 4:3	Approx. 2,530,000 pixels
Minimum illumination	0.28 lx (1/25 shutter, IRIS F1.4, Auto GAIN) - 1.5 lx (w/ supplied lens: auto gain, auto iris, 1/25 shutter speed)
S/N Ratio	54 dB (Y) (typical)
Horizontal resolution	1000 TV lines or more (1920 x 1080i mode)
Shutter speed	Auto: 50i/50p: 1/50-1/1750, 25p: 1/25-1/1750 Manual: 1/3 - 1/10000 1/50 - 1/1750 (50i, 50p), 1/25 - 1/1750 (25p)
Slow & Quick Motion function	Rec Format: 1080/50p, 1080/25p Frame Rate: 50fps, 25fps, 12fps, 6fps, 3fps, 2fps, 1fps Shutter Speed: 1/scan frame rate - 1/10000(Manual)

White Balance	Auto, Outdoor (5800K), in-door(3200K), One-push (Touch panel)

Inputs/Outputs

Audio input	XLR 3-pin (female) (x 2), LINE/MIC/MIC +48 V selectable
Composite output	RCA Type (x 1)
Audio output	RCA type (CH-1,CH-2)
Component Video Output	RCA Type (x 3) via Mini-D jack
USB	USB device, mini-AB/Hi-Speed (x 1)
Headphone output	Stereo mini jack (x 1) ø3.5mm
Remote	Stereo mini-minijack (ø2.5mm)
HDMI output	HDMI connector (x 1)

Monitoring

Built-in LCD monitor	3.5 inch-type, XtraFine LCD, approx. 921,600 dots(1920 x 480), 16:9 aspect ratio

Recording Media

Type	Memory Stick PRO Duo(Mark2), Memory Stick PRO-HG Duo,Memory Stick PRO-HG Duo HX. SD/SDHC/ SDXC Memory Card (Class 4 or higher)

Supplied Accessories

AC-VL1	AC Adaptor/Charger
NP-F770	Rechargeable Battery Pack
DK-415	Connecting cord
ECM-XM1	Microphone
RMT-845	Remote Commander
	Component video cable
	A/V connecting cable
	USB Cable
	USB Adaptor Cable (VMC-UAM1)
	Large eyecup
SEL18200	Lens
	Lens hood with lens cover
	Accessory shoe kit
CR2025	Lithium Battery
	Clock Lithium (Installed)
CMU-2.0	Application Software (CD-ROM)

Accessories

Batteries and Power Supplies

2NP-F970/B

Info-Lithium Battery Twin Pack

AC-VQL1BP

Intelligent Quad Battery Charger and Dual AC adaptor

Lights

HVL-LBPB

On-camera LED Video Light

NXCAM and AVCHD

HXR-FMU128

128GB Flash Memory Recording Unit

Cases

LCS-BP1BP

Soft Backpack Style Carrying Case

LCS-G1BP

Soft Carry Case

LCD Production Monitors

LPM-770BP

Portable LCD Field Monitor

Remote Controls

RM-1000BP

Remote Commander

RM-1BP

LANC Remote Commander

Tripods and Supports

VCT-PG11RMB

Tripod

VCT-SP2BP

Multi-function Camcorder Shoulder Support

VCT-SP1BP

Extendable Monopod Camcorder Support System